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Observations of Minor Planets, from photographs taken with the 30-in. Reflector of the Thompson Equatorial at the Royal Observatory, Greenwich, during the year 1907.

(*Communicated by the Astronomer Royal.*)

The following positions of minor planets were obtained from photographs taken with the 30-in. reflector during the year 1907.

The plates were measured with the astrographic micrometer. Six reference stars were, as a rule, measured with the planet, their positions being derived, when possible, from the Catalogues of the Astronomische Gesellschaft, or from the Radcliffe Catalogue 1890.

The positions given are not corrected for Parallax.

Log Parallax Correction = log Parallax Factor − log Δ.

Date and G.M.T. 1907. d	h m s	Apparent R.A. h m s	Apparent Dec. ° ′ ″	Log. Parallax Factor. R.A.	Dec.
		(8) Flora.			
Jan. 30	9 7 10	7 18 44·22	+23 36 22·6	−9·211	+0·631
Feb. 1	11 16 26	7 16 59·00	23 46 15·2	+8·873	0·612
		(402) Chloë.			
Feb. 1	11 29 52	8 47 41·17	+18 18 36·1	−8·756	+0·681
21	12 0 44	8 31 35·86	21 27 3·6	+9·187	0·656
Mar. 1	11 45 41	8 27 33·68	22 25 2·1	+9·270	0·652
		(511) Davida.			
Feb. 1	11 45 33	10 5 8·63	+25 24 20·7	−9·212	+0·608
21	11 39 55	9 49 24·84	28 15 19·5	−8·037	0·536
Mar. 1	11 55 46	9 43 24·31	29 3 7·1	+8·931	0·529
		(11) Parthenope.			
Mar. 20	10 41 30	10 41 6·06	+13 17 5·4	−8·215	+0·733
21	11 32 8	10 40 18·23	13 22 19·0	+8·866	0·734
22	10 41 52	10 39 34·84	13 27 2·4	−7·517	0·732
23	10 43 11	10 38 50·83	13 31 44·1	+7·915	0·731
		(79) Eurynome.			
Mar. 20	11 0 29	11 24 14·25	−0 21 16·2	−8·733	+0·838
21	11 43 28	11 23 21·17	0 13 42·7	+8·317	0·837
22	10 59 11	11 22 31·87	−0 6 37·7	−8·618	0·837
23	10 57 6	11 21 41·66	+0 0 37·1	−8·583	0·836

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Date and G.M.T. 1907.				Apparent R.A.			Apparent Dec.			Log. Parallax Factor. R.A.	Log. Parallax Factor. Dec.
d	h	m	s	h	m	s	°	′	″		
(82) Alkmene.											
Mar. 20	11	19	35	11	52	56·03	+3	24	43·6	−8·845	+0·814
21	11	54	24	11	52	3·14	3	28	42·7	−7·806	0·813
22	11	16	37	11	51	13·30	3	32	26·0	−8·771	0·813
23	11	13	52	11	50	22·41	3	36	10·8	−8·747	0·813
(68) Leto.											
Mar. 22	11	30	38	12	42	26·49	+3	12	31·8	−9·072	+0·816
23	11	27	34	12	41	37·65	3	16	39·1	−9·060	0·816
(488) Kreusa.											
Mar. 23	11	44	11	12	19	36·66	+17	48	11·4	−8·755	+0·687
Apr. 6	11	42	29	12	8	59·87	18	24	43·0	+8·702	0·680
18	10	13	2	12	1	40·33	18	19	45·4	−7·925	0·679
22	10	10	29	11	59	48·09	18	10	44·0	+8·226	0·681
(588) Achilles.											
Apr. 6	11	0	1	11	22	31·77	−5	10	57·0	+8·735	+0·864
May 4	9	44	36	11	14	29·73	4	9	40·1	+9·077	0·858
(35) Leukothea.											
Apr. 22	10	53	22	12	51	42·80	−12	43	10·4	+7·214	+0·897
24	10	19	57	12	50	12·49	12	40	17·8	−8·575	0·897
May 2	10	36	52	12	44	54·06	12	29	30·2	+8·704	0·896
(57) Mnemosyne.											
Apr. 22	10	31	44	12	57	34·77	−6	5	6·3	−8·636	+0·869
24	10	7	17	12	56	23·76	5	50	55·4	−8·627	0·867
(31) Euphrosyne.											
May 7	10	14	27	13	29	34·04	−8	20	19·4	−8·438	+0·879
8	10	53	0	13	28	42·91	8	21	42·7	+8·639	0·879
(451) Patientia.											
Apr. 18	10	37	3	14	24	31·69	+5	41	16·0	−9·278	+0·803
24	10	35	52	14	19	46·03	5	55	58·6	−9·180	0·799
May 2	10	53	25	14	13	21·86	6	7	35·4	−8·816	0·795
(6) Hebe.											
May 7	13	6	1	14	49	26·74	+7	10	26·6	+9·074	+0·789
8	11	20	56	14	48	36·53	7	14	6·3	−8·604	0·786

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Date and G.M.T. 1907. d	h m s	Apparent R.A. h m s	Apparent Dec. ° ′ ″	Log. Parallax Factor. R.A.	Dec.
		(393) Lampetia.			
May 2	11 10 9	14 56 38·16	−12 18 56·2	−9·040	+0·893
7	12 46 25	14 52 31·48	11 16 30·1	+8·932	0·890
8	11 7 58	14 51 45·50	11 4 58·3	−8·822	0·890
		(9) Metis.			
May 7	13 21 59	14 53 55·94	−12 52 25·5	+9·144	+0·893
8	11 32 57	14 52 59·70	12 50 8·0	−8·445	0·898
		(86) Semele.			
May 18	10 16 38	14 59 18·78	−12 42 32·6	−8·995	+0·895
19	12 18 33	14 58 30·22	12 40 1·2	+9·028	0·895
		(199) Byblis.			
May 2	11 30 38	15 37 26·93	−2 32 41·9	−9·138	+0·850
7	11 38 19	15 33 23·49	2 34 7·4	−8·948	0·850
8	11 50 51	15 32 32·61	2 34 49·2	−8·793	0·851
		(485) Genua.			
June 19	11 44 2	17 7 31·35	−4 36 20·8	+8·602	+0·861
July 4	10 54 1	16 56 37·06	4 35 36·2	+8·855	0·861
6	10 56 16	16 55 23·23	4 37 42·4	+8·949	0·861
		(17) Thetis.			
June 19	12 16 21	18 27 28·92	−17 32 2·1	+8·585	+0·913
24	12 33 52	18 22 52·19	17 48 59·3	+8·503	0·914
July 4	11 26 29	18 13 35·07	18 27 2·8	[0]	0·916
		(190) Ismene.			
June 19	12 52 48	18 42 56·85	−15 22 4·9	−7·520	+0·907
		(148) Gallia.			
July 10	11 22 11	20 20 12·00	−1 21 37·5	−9·217	+0·843
15	12 45 7	20 16 21·93	2 1 49·6	[0]	0·848
Aug. 6	12 39 57	19 58 5·21	5 55 37·3	+9·188	0·865
		(65) Cybele.			
Aug. 6	13 7 42	20 44 5·03	−15 37 54·2	+9·119	+0·902
19	11 10 41	20 35 21·16	16 24 43·2	+8·601	0·910
		(185) Eunice.			
Aug. 11	12 2 56	21 15 31·53	−4 58 45·1	+7·904	+0·864
15	11 31 36	21 12 29·44	5 53 25·7	−8·109	0·868
19	10 37 26	21 9 31·42	6 49 21·4	−8·847	0·872

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(431) Nephele.

Date and G.M.T. 1907.					Apparent R.A.			Apparent Dec.			Log. Parallax Factor.	
	d	h	m	s	h	m	s	°	′	″	R.A.	Dec.
Aug.	6	13	41	44	22	8	42·05	−12	50	35·3	+8·704	+0·897
	10	11	25	12	22	6	6·60	13	8	27·8	−9·149	0·894
	11	11	7	22	22	5	25·48	13	13	5·2	−9·205	0·893
	15	11	23	38	22	2	33·49	13	32	7·3	−9·029	0·898
	28	10	48	1	21	53	0·03	14	32	16·3	−8·828	0·903

(44) Nysa.

	d	h	m	s	h	m	s	°	′	″	R.A.	Dec.
Aug.	6	13	41	44	22	9	46·27	−12	42	30·1	+8·690	+0·897
	10	11	25	12	22	6	32·92	13	5	58·9	−9·149	0·894
	11	11	7	22	22	5	42·08	13	12	2·9	−9·205	0·893
	15	11	23	38	20	2	9·88	13	36	56·8	−9·029	0·898
	28	10	48	1	21	50	19·54	14	56	16·0	−8·796	0·904

(117) Lomia.

	d	h	m	s	h	m	s	°	′	″	R.A.	Dec.
Sept.	24	9	52	20	22	21	1·12	−12	26	8·7	−8·469	+0·896
	26	9	32	24	22	19	36·62	12	18	20·9	−8·675	0·895

(516) Amherstia.

	d	h	m	s	h	m	s	°	′	″	R.A.	Dec.
Sept.	23	9	52	20	22	41	58·09	− 1	56	39·5	−8·835	+0·847
	24	9	35	12	22	41	10·22	1	58	49·7	−8·948	0·847
	26	9	50	28	22	39	35·97	2	3	11·4	−8·694	0·848

(71) Niobe.

	d	h	m	s	h	m	s	°	′	″	R.A.	Dec.
Sept.	23	10	28	39	22	59	25·28	+17	50	24·4	−8·604	+0·686
	26	10	9	28	22	56	38·80	17	41	41·9	−8·686	0·688

(122) Gerda.

	d	h	m	s	h	m	s	°	′	″	R.A.	Dec.
Sept.	23	10	47	51	23	11	1·60	− 4	54	39·1	−8·435	+0·863
	24	10	24	40	23	10	23·02	4	59	8·0	−8·748	0·863

(554) Peraga.

	d	h	m	s	h	m	s	°	′	″	R.A.	Dec.
Sept.	23	11	4	48	23	17	28·27	+ 0	26	37·1	−7·982	+0·833
	24	10	45	22	23	16	35·02	0	21	33·5	−8·525	0·834
	26	10	26	5	23	14	49·70	0	11	19·0	−8·679	0·835

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d	h	m	s	h	m	s	°	′	″	R.A.	Dec.
				(433) Eros.							
Sept. 23	11	19	36	1	0	31·03	+35	6	18·0	−9·252	+0·433
24	10	56	42	0	59	10·00	35	19	55·8	−9·324	0·445
26	10	41	42	0	56	15·82	35	46	3·7	−9·340	0·440
Oct. 12	12	13	30	0	26	6·96	37	44	15·8	+9·138	0·344
15	9	29	39	0	20	6·05	37	44	50·1	−9·184	0·351
19	8	14	11	0	12	0·96	37	34	59·3	−9·392	0·415
22	9	4	5	0	6	4·19	37	19	28·9	−9·083	0·350
25	9	12	39	0	0	32·93	36	57	47·0	−8·843	0·345
				(326) Tamara.							
Oct. 15	11	22	11	1	16	28·32	−2	41	0·1	−9·103	+0·850
25	10	39	41	1	3	14·69	1	56	19·7	−8·245	0·847
				(441) Bathilde.							
Oct. 12	13	4	40	1	31	4·12	+19	56	38·7	+8·967	+0·665
				(53) Calypso.							
Oct. 12	12	31	1	2	18	28·70	+5	27	10·0	−8·619	+0·800
				(563) Suleika.							
Nov. 15	10	50	40	2	39	12·96	+2	27	8·5	−8·318	+0·820
29	11	9	46	2	28	26·57	3	30	8·3	+9·054	0·814
Dec. 5	8	47	0	2	25	22·88	4	8	20·9	−8·845	0·809
6	8	47	31	2	24	58·04	4	15	26·1	−8·794	0·809
				(192) Nausicaa.							
Nov. 15	12	2	45	4	6	4·77	+34	22	37·7	−8·733	+0·411
Dec. 10	11	26	52	3	38	56·32	32	56	59·6	+9·067	0·458
				(617) Patroclus.							
Nov. 29	9	59	59	4	39	40·73	+35	54	55·8	−9·383	+0·451
29	10	37	13	4	39	39·60	35	54	57·5	−9·247	0·414
Dec. 3	9	33	12	4	36	48·22	35	59	7·1	−9·406	0·459
10	12	47	2	4	31	39·85	36	3	32·6	+9·239	0·407

Royal Observatory, Greenwich:
1908 *November* 4.

Photographs of Comet c 1908, taken at the Royal Observatory, Greenwich.

(Communicated by the Astronomer Royal.)

This comet has been under observation at the Royal Observatory since the announcement of its discovery by Morehouse at the Yerkes Observatory.

Photographs with short exposure, for determination of its position, have been taken with the 30-inch reflector on every available night, but in addition an extensive series of photographs with long exposures, varying from 5 to 60 minutes, have been secured on every possible occasion. The first photograph, taken on September 4, showed that the comet had a considerable tail. Subsequent photographs on September 6, 7, and 8 showed such remarkable changes in the formation of the tail that it was obvious that it would be necessary to photograph at much shorter intervals than 24 hours in order to follow these changes. It was decided, therefore, that photographs should be taken at short intervals through the night. At first exposures up to about 60 minutes were given, sufficient to show the tail extending to the edge of the plate, a distance of about 90′, but later, as the comet became brighter, the exposure was shortened to 10–15 minutes so that the fine detail should not be blurred by the motion of the particles in the tail.

Supplementing the above series, a number of photographs have been obtained with a portrait lens of 3¼ inches aperture and 11 inches focal length (kindly lent by Mr. W. Bowyer), with exposures ranging from 24 minutes to 90 minutes.

List of Photographs of Comet c 1908, taken with the 30-inch Reflector.

Date. 1908.		Limiting Times of Photographs (Middle of Exposure), G.M.T.	No. of Photos.	Exposure.	Remarks.
		h m h m		m m	
Sept.	4	15 44	1	10	Guiding imperfect, the motion of the comet being unknown. Tail extends 30′.
	6	14 14–15 31	2	30, 47	Principal feature — parabolic envelopes, which are unsymmetrically arranged about nucleus.
	7	14 56–15 48	2	60, 15	Coma bright; envelopes no longer pronounced; tail consists of wavy streamers much disturbed. Dark rays shown. These appear to be darker than the background of the sky.
	8	15 37	1	45	Head similar to Sept. 7; tail consists of two main streamers much contorted.